

### **Amendments to the Claims:**

Please cancel Claims 2, 3 and 6, withdraw Claims 4, 7, 9, and 10, and amend Claims 1, 5, 8 and 11.

This listing of claims will replace all prior versions and listings of the claims in the application:

### **Listing of Claims:**

1. (Currently amended) A method for the diagnosis of susceptibility diabetes in an individual comprising the step of

determining the expression pattern in the adipose tissue of the individual of any of the genes listed in Tables 1, 2 and 3 selected from the group consisting of add1/SREBP, aa667872 (similar to ubiquinol-cytochrome c reductase core protein 2), cytochrome c oxidase subunit VIIa, and stearyl-CoA desaturase, to determine if the individual has susceptibility to diabetic disease, and

diagnosing the individual as susceptible to diabetes if the expression of these genes is decreased as compared to other individuals.

2. - 3. (Cancelled)

4. (Withdrawn) A method for the diagnosis of diabetes in and individual comprising the step of determining the expression pattern in the adipose tissue of the individual of at least four genes, the four genes selected from at least four of the gene groupings listed on Table 1 or Table 2.

5. (Currently amended) A method for the diagnosis of predisposition to diabetes in an individual comprising the steps of

taking a sample of adipose tissue from the individual; and

determining the expression pattern of a gene in the adipose tissue of the individual to determine if the individual has ~~diabetic disease or a genetic~~ predisposition to diabetic disease, the gene being selected from selected from the group consisting of add1/SREBP, aa667872 (similar to ubiquinol-cytochrome c reductase core protein 2), cytochrome c oxidase subunit VIIa, and stearyl-CoA desaturase, and the expression pattern of the gene being decrease expression in the individual.

6. (Cancelled)

7. (Withdrawn) A method as claimed in claim 4 wherein the genes are selected from at least four of the gene groupings in the group consisting of hormone and signal transduction genes, mitochondrial genes, lipid metabolism genes, transcription factor genes, secreted protein genes, cytoskeletal genes, lysosomal genes, immune/complement genes, cell proliferation genes, adipose-specific genes, and membrane protein genes.

8. (Currently amended) A method for the diagnosis of susceptibility of an individual to diabetes comprising assaying the expression level of the gene SREBP in the adipose tissue of the individual, the decreased level of expression of the gene SREBP being indicative of susceptibility to diabetes.

9. (Withdrawn) A method for the diagnosis of the development of insulin resistance comprising the steps of

determining the expression patterns in adipose tissue of the individual of the genes listed in Table 3 to determine if the individual has developed insulin resistance.

10. (Withdrawn) A method for the diagnosis of insulin resistance in an individual comprising the step of

determining the expression pattern in the adipose tissue of the individual of at least four of the genes listed in Table 3 those genes being determinative as to whether the individual has developed insulin resistance.

11. (Currently amended) A method for the diagnosis or prognosis of obesity, incipient obesity, or the transition from obese to diabetic ~~diabetic~~, in an individual, comprising the step of

determining the expression pattern in the adipose tissue of the individual of any of the genes listed in Tables 1, 2 and 3 selected from the group consisting of add1/SREBP, aa667872 (similar to ubiquinol-cytochrome c reductase core protein 2), cytochrome c oxidase subunit VIIa, and stearoyl-CoA desaturase to determine if the individual has gene expression consistent with said diagnosis or prognosis, a decrease in expression of those genes being associated with the transition from obese to diabetic.